NO	REQUIREMENT	YOUR DOCUMENT	C	N	DOC REVIEW / PRE-ASSESSMENT NOTES	C	N	ASSESSMENT NOTES
5.6.2.1.2	Certain calibrations cannot be strictly made in SI units. In these cases, calibration shall provide confidence in measurements by establishing traceability to appropriate measurement standards such as:							
-	Use of certified reference materials provided by a competent supplier.		C			C		None utilized for scope testing.
-	Use of specified methods and/or consensus standards that are clearly described and agreed by all parties concerned.		C			C		None utilized for scope testing.
5.6.2.1.2	Participation in a suitable program of interlaboratory comparisons is required where possible.		C			C		The laboratory has very limited options available for the use of an approved PT provider. The laboratory has participated in this program. The laboratory does perform other quality assurance activities from 5.9 to support quality of testing.
5.6.2.2	**Testing**							
5.6.2.2.1	Test labs' requirements given in 5.6.2.1 apply for measuring and test equipment, unless it has been established that the calibration contributes little to the overall uncertainty of the results.		C			C		Observed compliance.

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NO	REQUIREMENT	YOUR DOCUMENT	C	N	DOC REVIEW / PRE-ASSESSMENT NOTES	C	N	ASSESSMENT NOTES
5.6.2.2.2	Where traceability to SI units is not possible or relevant, certified reference materials, agreed methods and/or consensus standards are required as for calibration labs (see 5.6.2.1.2).		C			C		Laboratory compliant.
Comments on the laboratory's compliance with this element:								
The laboratory appears compliant with the requirements of this section.								

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NO	REQUIREMENT	YOUR DOCUMENT	C	N	DOC REVIEW / PRE-ASSESSMENT NOTES	C	N	ASSESSMENT NOTES
5.6.3	Reference Standards & Reference Materials							
5.6.3.1	**Reference Standards**							
	Programs and procedures for calibration of reference standards.		C			C		Compliant. Procedures available detailing the use of standards where necessary.
	Reference standards shall be calibrated by a body that can provide traceability, as described in 5.6.2.1		C			C		None utilized for scope testing.
	Reference Standards used for calibration purposes only, unless shown that their performance as a standard is not invalidated.		C			C		None utilized.
	Reference standards shall be calibrated before and after any adjustment.		C			C		None utilized.
5.6.3.2	**Reference Materials**							
	Where possible, traceable to SI units, or to certified reference materials.		C			C		None utilized supporting scope testing.
	Internal reference materials shall be checked as far as technically and economically possible.		C			C		None utilized supporting scope testing.

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5.6.3.3	**Intermediate Checks**							
	Carried out according to defined procedures and schedules.		C			C		The laboratory has limited options but does perform intermediate checks where possible to assure correct testing.
5.6.3.4	**Transportation and Storage**							
	Procedures for safe handling, transport, and use of reference standards and materials.		C			C		
Comments on the laboratory's compliance with this element:								
The laboratory appears compliant with the requirements of this section.								

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NO	REQUIREMENT	YOUR DOCUMENT	C	N	DOC REVIEW / PRE-ASSESSMENT NOTES	C	N	ASSESSMENT NOTES
5.7	**Sampling**							
5.7.1	Where necessary, a sampling plan and procedures. Where possible, based on statistical methods		C			C		Sampling not performed by this lab.
5.7.1	Sampling plan and procedure are available where sampling takes place.		C			C		Sampling not performed by this lab.
5.7.2	Client-required deviations, additions or exclusion from the documented procedure shall be recorded in detail, with actual sampling data, and included in the documents containing the results.		C			C		Sampling not performed by this lab.
5.7.3	Procedures for recording data.		C			C		Sampling not performed by this lab.
Comments on the laboratory's compliance with this element:								
Sampling not performed by this lab to support scope testing.								

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NO	REQUIREMENT	YOUR DOCUMENT	C	N	DOC REVIEW / PRE-ASSESSMENT NOTES	C	N	ASSESSMENT NOTES
5.8	**Handling of Test and Calibration Items**							
5.8.1	Procedure for transporting, receipt, handling, protection, storage, retention and/or disposal of items		C		Policy and procedure in place.	C		Procedure in place and appears understood and followed by lab personnel.
5.8.2	Items identified and identity retained throughout life of item in lab.		C			C		Observed compliance. Sufficient systems in place to track sample identity.
5.8.3	Upon receipt of item, abnormalities or departures from normal or specified conditions are recorded. When suitability is in doubt, the client is notified.		C			C		Observed compliance
5.8.4	Procedures and facilities to avoid deterioration, loss or damage to t/c item.		C			C		Observed compliance.

Comments on the laboratory's compliance with this element:

The laboratory appears compliant at the time of the assessment. The laboratory utilizes an appropriate sample tracking system. This system appears effective.

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NO	REQUIREMENT	YOUR DOCUMENT	C	N	DOC REVIEW / PRE-ASSESSMENT NOTES	C	N	ASSESSMENT NOTES
5.9	**Assuring the Quality of Test and Calibration Results**							
5.9.1	Procedures for monitoring validity of t/c results; which may include:		C			C		Quality assurance procedures are in place and utilized by the lab.
a)	Regular use of certified reference materials and/or internal qc using secondary reference material.		C			C		Reference materials not appropriate for this type of testing.
b)	Participation in interlaboratory comparison or proficiency testing.		C			C		The laboratory has very limited options available for the use of an approved PT provider. The laboratory has participated in this program. At the time of the assessment the final results were not completed by PT provider. The PT provider is currently compiling the data from participants.
c)	Replicate t/c using same or different methods.		C			C		Not typically performed.
d)	Retesting or recalibration of retained items.		C			C		Not typically performed.

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NO	REQUIREMENT	YOUR DOCUMENT	C	N	DOC REVIEW / PRE-ASSESSMENT NOTES	C	N	ASSESSMENT NOTES
e)	Correlation of results for different characteristics of an item.		C			C		Not typically performed.
5.9.2	Analyze quality control data. If found outside predefined criteria, action to correct and prevent incorrect results from being reported shall be taken.		C			C		The laboratory has a process in place for review of quality assurance data. This data is reviewed and analyzed where available. Limited options available for quality assurance activities as defined in this section but performed and analyzed where possible.

Comments on the laboratory's compliance with this element:

The laboratory is compliant with the requirements of this section at the time of the assessment. The laboratory performs quality assurance activities where possible that support compliance with these requirements. The laboratory has very limited options available for the use of an approved PT provider but there does appear to be at least one approved provider offering a PT program. The laboratory has participated in this program. At the time of the assessment the final results were not completed by PT provider. The PT provider is currently compiling the data from other participants. Data will be provided to L-A-B once completed by the provider. Where available, the laboratory does perform other quality assurance activities from 5.9 to support quality of testing.

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NO	REQUIREMENT	YOUR DOCUMENT	C	N	DOC REVIEW / PRE-ASSESSMENT NOTES	C	N	ASSESSMENT NOTES
5.10	**Reporting the Results**							
5.10.1	General							
	Results reported accurately, clearly, unambiguously and objectively, IAW instructions in the method.		C			C		Observed compliance. Test reports appeared clear and meeting the requirements of this section.
	Results reported in test report or calibration certificate includes information requested by the client and necessary for interpretation of results.		C			C		Laboratory appears compliant with the requirements of this section. Contract review defines the client reporting needs if different from standard reporting format.
	For internal clients, or with written agreement with client, results may be reported in a simplified way. All information required by 5.10.2 to 5.10.4 shall be readily available in the lab that performed the T/C.		C			C		No internal clients.
5.10.2	Test Reports and Calibration Certificates							

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NO	REQUIREMENT	YOUR DOCUMENT	C	N	DOC REVIEW / PRE-ASSESSMENT NOTES	C	N	ASSESSMENT NOTES
	Test reports and calibration certificates include 17025 listed information, unless they have a valid reason for not doing so.		C			C		Observed compliance. Reports appeared clear and detailed.
a)	Title		C			C		Observed Compliance.
b)	Name and address of lab and location where T/C was performed, if different from lab.		C			C		Observed Compliance.
c)	Unique identification of report or certificate, on each page and identification that the page is recognized as a part of the whole and a clear indication of the end of the report or certificate.		C			C		Observed Compliance.
d)	Name and address of client.		C			C		Observed Compliance.
e)	Identification of the method(s) used.		C			C		Observed Compliance.
f)	Description, condition, and unambiguous identification of the item tested or calibrated.		C			C		Observed Compliance.
g)	Date of receipt of item(s), where critical to results. Date(s) of performance of T/C.		C			C		Observed Compliance.
h)	Reference to the sampling plan and procedure.		C			C		Observed Compliance.

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i)	T/C results with, where appropriate, the units of measure.		C			C		Observed Compliance.
j)	Name(s), functions(s), and signatures of personnel authorizing the report/certificate.		C			C		Observed Compliance.
k)	Where relevant, a statement that the results relate only to the items t/c.		C			C		Observed Compliance.
5.10.3	Test Reports							
	Where necessary for the interpretation of results, the following shall be included in test reports:							
a)	Deviations, additions, or exclusions from the test method, and information on specific test conditions.		C			C		Laboratory has a process in place if necessary. Appeared understood. No examples observed.
b)	Where relevant, a statement of compliance/non-compliance with the requirements/specification.		C			C		Observed compliance.
c)	Where applicable, a statement of the estimated uncertainty.		C			C		Not currently required by customers. Statement provided on test reports

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d)	Where appropriate and needed, opinions and interpretations.		C			C		Observed compliance.
e)	Additional information required by methods, clients or groups of clients.		C			C		Observed compliance.
5.10.3.2	Sampling in reports shall include:							
a)	Date of sampling.		C			C		Sampling not performed.
b)	Unambiguous identification of the substance, material or product sampled.		C			C		Sampling not performed.
c)	Location of sampling.		C			C		Sampling not performed.
d)	Reference to sampling plan and procedure.		C			C		Sampling not performed.
e)	Environmental conditions during sampling that may affect the interpretations of results.		C			C		Sampling not performed.
f)	Standard or specification for the sampling method or procedure, and deviations, additions to or exclusions from the specification concerned.		C			C		Sampling not performed.
5.10.4	Calibration Certificates							

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5.10.4.1	Calibration certificates shall also include:							
a)	Conditions (e.g. environmental) under which the calibrations were made that influenced the results.							N/A – Test Reports
b)	Uncertainty of measurement and/or a statement of compliance with an identified metrological specification or clauses thereof.							N/A – Test Reports
c)	Traceability of measurements.							N/A – Test Reports
5.10.4.2	Certificates shall relate only to quantities and results of functional tests. If a statement of compliance with a specification is made, this shall identify which clauses of the specification are met or not met.							N/A – Test Reports
5.10.4.2	When a statement of compliance is made omitting the results and associated uncertainties, the lab shall record those results and maintain them for future reference.							N/A – Test Reports

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NO	REQUIREMENT	YOUR DOCUMENT	C	N	DOC REVIEW / PRE-ASSESSMENT NOTES	C	N	ASSESSMENT NOTES
5.10.4.2	When a statement of compliance is made, the uncertainty shall be taken into account.							N/A – Test Reports
5.10.4.3	When an item for calibration is adjusted or repaired, the results before and after adjustment or repair, if available, shall be reported.							N/A – Test Reports
5.10.4.4	Calibration certs and labels shall not contain recommendation on the cal interval, except where agreed with the client.							N/A – Test Reports
5.10.5	Opinions and Interpretations							
	Basis for opinions and interpretations. Opinions and interpretations clearly marked in report.		C			C		Opinions not provided for the scope testing.
5.10.6	Testing and Calibration Results Obtained from Subcontractors							
	Subcontracted test results clearly identified.		C			C		Subcontracting not performed.

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NO	REQUIREMENT	YOUR DOCUMENT	C	N	DOC REVIEW / PRE-ASSESSMENT NOTES	C	N	ASSESSMENT NOTES
	On subcontracted calibrations, the laboratory performing work shall issue the calibration certificate.		C			C		Subcontracting not performed.
5.10.7	Electronic Transmission of Results							
	Results transmitted by telephone, telex, fax, or other electronic or electromagnetic means shall follow the requirements of 17025.		C			C		Discussed reviewed procedures and practice. Laboratory is compliant.
5.10.8	Format of Reports and Certificates							
	Designed to minimize the possibility of misunderstanding or misuse.		C			C		Clear test report format.
5.10.9	Amendments to Reports or Certificates							
	Made in the form of a further document which includes statement: "Supplement to Test Report [or Calibration Certificate}, serial number [or as otherwise identified] or equivalent wording.		C			C		None observed but the process was reviewed and discussed to assure compliance with this requirement.

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	Amendments shall meet the requirements of 17025.		C			C		None observed.
	When necessary to issue a complete new report or certificate, this shall be uniquely identified and contain reference to the original that it replaces.		C			C		None observed.

Comments on the laboratory's compliance with this element:

The laboratory appears to meet the requirements of this section. Test reports are very through and detailed. Reviewed several reports in detail to assure compliance.

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GENERAL L-A-B REQUIREMENTS

NO	REQUIREMENT	YOUR DOCUMENT	C	N	DOC REVIEW / PRE-ASSESSMENT NOTES	C	N	ASSESSMENT NOTES
1	The laboratory has evidence of traceability IAW Policy 001.		C			C		The laboratory appears to meet the requirements of L-A-B Policy 001 and 001.1. Traceability assured through 17025 accredited calibration laboratories.
2	The laboratory has evidence of the appropriate proficiency testing IAW Policy 002.		C			C		The laboratory has very limited options available for the use of an approved PT provider but there does appear to be at least one approved provider offering a PT program. The laboratory has participated in this program. At the time of the assessment the final results were not completed by PT provider. The PT provider is currently compiling the data from other participants. Data will be provided to L-A-B once completed by the provider. The laboratory performs quality assurance activities where possible that support compliance with these requirements. Where available, the laboratory does perform other quality assurance activities from 5.9 to support quality of testing.

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3	The laboratory has evidence of no changes affecting the accreditation or those changes have been notified to L-A-B.		C			C		No staff changes.
4	Proposed Scope submitted in accordance with L-A-B instructions. (see appropriate Form 28 series)		C			C		Scope meets L-A-B requirements.

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LABORATORY ACCREDITATION BUREAU a division of A-S-B

EMC&T LAP

Form 406

Electromagnetics Compatibility & Telecommunications Accreditation Program Technical Checklist

(Based on the FCC Technical Assessment Evaluation Checklist - July 22, 2010)

Laboratory Information

Company Name	[redacted]
Laboratory Location	[redacted]
Assessor Name	Jason Stine (Lead); Victor Kuczynski (Technical)
Date of Assessment	April 3-4, 2013
Scope of Accreditation	C63.4-2003

Instructions to the Assessor: This checklist addresses specific criteria relating to accreditation of a laboratory to determine the capability and competence of that laboratory to perform tests to show compliance of equipment subject to the FCC EMC Regulations contained in 47 CFR Parts 2, 15, and 18. It is intended for use during the assessment phase of the accreditation process as a guide to evaluate the capability of the applicant laboratory facility and to determine the competency of the laboratory personnel for performing the required measurements. It is not intended to replace the good engineering judgment of the technical assessor or a thorough evaluation of the facility. Other points may and should be added to this checklist or the L-A-B Form 205.1 – Technical Competency Evaluation as the on-site assessment progresses.

Circle all items you observed and verified at the laboratory. Circle the letter "Y", representing "yes" to show conformance with the criteria. Circle the letter "N", representing "No", to show a non-compliance. If the item is "Not Applicable", circle "N/A". Record an explanation of any nonconformity or comment on the comment sheet provided at the end of the checklist.

I. **DOCUMENTATION** (The laboratory should have copies of appropriate FCC rules, standards and measurement methods based on its scope of accreditation.)				**Comments**
Y			1. C63.4-2003: *American National Standard for Method of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.*	
		N/A	2. ANSI C63.4-2009, *American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.*	Laboratory requested only C63.4 2003
		N/A	3. FCC MP-5-1986: *Methods of measurement of radio noise emissions from Industrial, Scientific and Medical (ISM) equipment.* *Note: This procedure is only required when the prospective testing laboratory is being accredited for measuring ISM equipment. The special conditions and requirements in MP-5 must be taken into consideration along with the specific requirements in 47 CFR Part 18, which do not always follow ANSI C63.4.*	Laboratory requested only C63.4 2003
Y			4. FCC Rules and Regulations, 47 CFR Parts 2, 15 and 18.	
II. MEASUREMENT INSTRUMENTATION				**Comments**
Y			5. Are 50 ohm /50 µH LISNs used per C63.4-2003, Clause 4.1.2 (C63.4-2009, Clause 4.3)? *Note: See 47CFR 18.307 which bases measurements on the use of a 50 ohm /50 µH LISN.*	
Y			6. Is the insertion loss of the LISN taken into account when determining the test result? (C63.4-2003, Annex E/C63.4-2009, Annex B)	

Y			7. Are the LISN impedance measurements made at the point where the Equipment Under Test (EUT) is connected to the LISN with 50 ohm termination on the instrumentation monitoring port? *Note: Connection of the EUT to the LISN socket or at the end of an extension cord may make a difference in line conducted measurements. (C63.4-2003, Annex E/C63.4-2009, Annex B)*	
Y			8. Are all unused EUT ports on the LISN appropriately terminated? (C63.4-2003, Annex E/C63.4-2009, Annex B)	
Y			9. Are the LISNs installed and used in accordance with C63.4-2003, Clauses 5, 6 and 7 (C63.4-2009, Clauses 5, 6 and 7) and MP-5? *Note: The test personnel should be prepared to demonstrate how the LISNs are installed and used.*	
Y			10. Does each of the antennas used for compliance measurements comply with the criteria in C63.4-2003, Clause 4.1.5 (C63.4-2009, Clause 4.5) and MP-5? *Note: Rod and log-spiral antennas are not permitted for FCC type measurements (47 CFR §15.31(a)(3)).*	
Y			11. Are the measurement antennas calibrated in accordance with ANSI C63.5? (C63.4-2003, Clause 4.1.5/C63.4-2009, Clause 4.7.2) *Note: The calibration procedure outlined in ANSI C63.5-2006 is based solely on horizontally polarized measurements performed at a standard antenna calibration site, with a measurement distance of 10 meters. The FCC has stated that ANSI C63.5-2006 should be used to calibrate measurement antennas (KDB Publication 822428).*	